

4. The transmitter system of claim 1 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

5. The transmitter system of claim 4 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

6. In a digital communication system employing a transmission medium shared among multiple users, a transmitter system comprising:

a first mapper that outputs complex symbol values falling on a first symbol constellation responsive to data relating to coordinating access to said transmission medium;

a second mapper that outputs complex symbol values falling on a second symbol constellation responsive to data not relating to coordinating access to said transmission medium; and

a control system that allocates transmission time between output of said first mapper and output of said second mapper; and

wherein complex symbol values of said first symbol constellation are spaced more widely than complex symbol values of said second symbol constellation.

7. In a digital communication system employing a transmission medium shared among multiple users, a receiver system comprising:

a first decoder that decodes data related to coordinating access to said transmission medium according to a first encoding scheme;

a second decoder that decodes data not related to coordinating access to said transmission medium according to a second encoding scheme; and

a control system that selects output of either said first decoder or said second decoder for reception; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

8. The receiver system of claim 7 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

A2 9. (AMENDED) The receiver system of claim 7 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

10. The receiver system of claim 7 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

11. The receiver system of claim 7 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

12. (AMENDED) In a digital communication system employing a transmission medium shared among multiple users, a method for transmitting comprising:

encoding data related to coordinating access to said transmission medium according to a first encoding scheme;

A3 encoding data not related to coordinating access to said transmission medium according to a second encoding scheme; and

transmitting responsive to output by either said first encoder or said second encoder; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

13. The method of claim 12 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

14. The method of claim 12 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

15. The method of claim 12 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

16. The method of claim 15 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

17. In a digital communication system employing a common transmission medium, a method for controlling transmission comprising:

transforming data into a modulation signal, said data comprising data relating to controlling access to said common transmission medium and data not relating to controlling access to said common transmission medium; and

converting said modulation signal to an RF signal for transmission; and

wherein said transforming step applies greater protection against channel impairments to said data relating to controlling access to said common transmission medium.

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New Claims 18-25:

18. In a digital communication system employing a transmission system employed by multiple users, a method for receiving comprising:

decoding data related to coordinating access to said transmission medium according to a first encoding scheme;

A4 decoding data related to coordinating access according to a second encoding scheme; and

selecting for reception between data decoded according to said first encoding scheme and data decoded according to said second encoding scheme; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

19. The method of claim 18 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

20. The method of claim 18 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

21. The method of claim 18 wherein said first encoding scheme and said second encoding scheme comprise block encoding schemes.

22. The method of claim 18 wherein said block encoding schemes comprise Reed-Solomon encoding schemes.

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23. In a digital communication system employing a transmission medium shared among multiple users, apparatus for transmitting comprising:

first means for encoding data related to coordinating access to said transmission medium according to a first encoding scheme;

second means for encoding data not related to coordinating access to said transmission medium according to a second encoding scheme; and

means for transmitting responsive to output by either said first encoding means or said second encoding means; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

24. In a digital communication system employing a common transmission medium, apparatus for controlling transmission, said apparatus comprising:

means for transforming data into a modulation signal, said data comprising data relating to controlling access to said common transmission medium and data not relating to controlling access to said common transmission medium; and

means for converting said modulation signal to an RF signal for transmission; and

wherein said transforming means applies greater protection against channel impairments to said data relating to controlling access to said common transmission medium.

25. In a digital communication system employing a transmission system employed by multiple users, apparatus for receiving, said apparatus comprising:

means for decoding data related to coordinating access to said transmission medium according to a first encoding scheme;

means for decoding data related to coordinating access according to a second encoding scheme; and

means for selecting for reception between data decoded according to said first encoding scheme and data decoded according to said second encoding scheme; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

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